

REMARKS

This response is intended as a full and complete response to the non-final Office Action mailed August 4, 2004. In the Office Action, the Examiner notes that claims 1-10 are pending and rejected. By this response, the Applicant has amended claims 1-4, 6-8, and 10, claims 2, 5, and 9 continue as being unamended, and new claims 11-18 have been added.

In view of both the amendments presented above and the following discussion, the Applicant submits that none of the claims now pending in the application are anticipated or obvious under the respective provisions of 35 U.S.C. §102 and 103. Further, the Applicant submits that the claimed invention is directed to statutory subject matter under the provisions of 35 U.S.C. §101. Thus, the Applicant believes that all of the pending claims are now in allowable form.

It is to be understood that the Applicant, by amending the claims, does not acquiesce to the Examiner's characterizations of the art of record or to Applicant's subject matter recited in the pending claims. Further, the Applicant is not acquiescing to the Examiner's statements as to the applicability of the art of record to the pending claims by filing the instant responsive amendments.

OBJECTIONS

IN THE SPECIFICATION:

The Applicant has amended the specification to correct minor typographical errors noted by the Examiner as well as other minor typographical errors. Further, the Applicant has amended the specification to provide the omitted Serial No. and filing date on line 8 of page 1. The Applicant submits that such amendments do not add any new subject matter to the application.

IN THE DRAWINGS

Applicant has amended the drawings as suggested by the Examiner and has provided Replacement Sheets 2, 4 and 6 including amended FIGS. 2, 4 and 6. Specifically, the Applicant has changed "Quality of Service IEI" to "Quality of Service IE" in Octet 1 of FIGS. 2, 4, and 6, as suggested by the Examiner. The Applicant submits

that such changes to the drawings do not add any new subject matter to the application.

CLAIM OBJECTIONS

The Examiner has objected to claims 4, 7 and 9 because the word "as" should be --at-- on line 3 of claim 4, on line 3 of claim 5 and on line 3 of claim 9.

In response to the Examiner's objection, the Applicant has amended the claims as suggested by the Examiner. Therefore, the Applicant respectfully requests that the objection be withdrawn.

REJECTIONS

35 U.S.C. §101

Claim 10

The Examiner has rejected claim 10 under 35 U.S.C. §101 stating that "the claimed invention is directed to non-statutory subject matter. The claimed transmission frame is not a process, machine, manufacture, or composition of matter." The Applicant respectfully traverses the Examiner's rejection.

The Applicant have amended independent claim 10 to further clarify the inventive features of the Applicant's invention. In particular, claim 10, as amended, recites:

"Apparatus for use in a mobile station, comprising:
means for attaching to a wireless data network; and
means for performing asymmetric traffic class negotiation with the
wireless data network during a single resource reservation protocol
(RSVP) session by transmitting to the wireless data network, a quality of
service information element (QoS IE) comprising at least two traffic class
fields, one for an uplink direction and one for a downlink direction
associated with the mobile station, said QoS IE further comprising at least
one QoS class indicator for prioritizing a plurality of acceptable QoS traffic
classes."

The Applicant submits that claim 10, as amended, is directed to statutory subject matter. As such, the Applicant submits that claim 10 fully satisfies the requirements of

35 U.S.C. §101 and is patentable thereunder. Therefore, the Applicant respectfully requests that the Examiner's rejection be withdrawn.

35 U.S.C. §102

Claims 1-3 and 10

The Examiner has rejected claims 1-3 and 10 under 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 6,654,610 to Chen et al. (hereinafter "Chen"). The Applicant respectfully traverses the rejection.

Applicant's independent claims 1 and 10 recite:

1. "A method for use in a mobile station, the method comprising the steps of:
attaching to a wireless data network; and
performing asymmetric traffic class negotiation with the wireless data network during a single resource reservation protocol (RSVP) session by transmitting to the wireless data network, a quality of service information element (QoS IE) comprising at least two traffic class fields, one for an uplink direction and one for a downlink direction associated with the mobile station, said QoS IE further comprising at least one QoS class indicator for prioritizing a plurality of acceptable QoS traffic classes." (emphasis added).
10. "Apparatus for use in a mobile station, comprising:
means for attaching to a wireless data network; and
means for performing asymmetric traffic class negotiation with the wireless data network during a single resource reservation protocol (RSVP) session by transmitting to the wireless data network, a quality of service information element (QoS IE) comprising at least two traffic class fields, one for an uplink direction and one for a downlink direction associated with the mobile station, said QoS IE further comprising at least one QoS class indicator for prioritizing a plurality of acceptable QoS traffic classes." (emphasis added).

"Anticipation requires the presence in a single prior art reference disclosure of each and every element of the claimed invention, arranged as in the claim" (Lindemann Maschinenfabrik GmbH v. American Hoist & Derrick Co., 730 F.2d 1452, 221 U.S.P.Q. 481, 485 (Fed. Cir. 1984) (citing Connell v. Sears, Roebuck & Co., 722 F.2d 1542, 220 U.S.P.Q. 193 (Fed. Cir. 1983)) (emphasis added). The Chen reference fails to disclose each and every element of the claimed invention, as arranged in the claim.

The Chen reference discloses

It is assumed that an Uplink QoS IE and a Downlink QoS IE are included as part of the Activate PDP Context or Update PDP Context message. Different message types may be used to differentiate between the two so that a receiver of the Activate PDP Context or Update PDP Context message can easily tell whether QoS IEs for uplink, downlink or both are within the same message. (see Chen, column 11, lines 21-28).

The Activate PDP Context messages of Chen include a QoS IE for an uplink connection, a QoS IE for a downlink connection or QoS IEs respectively for both uplink and downlink in the same message (i.e., an activate PDP context message including two QoS IEs). In other words, QoS IE is capable of including information for either uplink or downlink connectivity but not both.

By contrast, the Applicant's invention performs asymmetric traffic class negotiation by transmitting to the wireless data network a quality of service information element (QoS IE) comprising at least one QoS class indicator for prioritizing a plurality of acceptable QoS traffic classes. For example, the plurality of QoS traffic class fields may be associated with a QoS request in a single QoS IE with respect to the uplink direction and/or the downlink direction associated with the mobile station. That is, the Applicant's invention provides that a single QoS IE is capable of providing traffic class prioritization in either the uplink and/or downlink direction. Therefore, the Chen reference fails to teach each and every element of the claimed invention, as arranged in the claim.

As such, the Applicant submits that independent claims 1 and 10 are not anticipated and fully satisfy the requirements of 35 U.S.C. §102 and are patentable thereunder. Furthermore, claims 2 and 3 depend directly from independent claim 1 and recite additional features thereof. As such and at least for the same reasons as discussed above, the Applicant submits that these dependent claims are also not anticipated and fully satisfy the requirements of 35 U.S.C. §102 and are patentable thereunder. Therefore, the Applicant respectfully requests that the Examiner's rejection be withdrawn.

Claims 1, 3, 5, 6 and 8

The Examiner has rejected claims 1, 3, 5, 6 and 8 under 35 U.S.C. §102(e) as being anticipated by PCT No. WO 00/10357 to Haumont et al. (hereinafter "Haumont"). The Applicant respectfully traverses the rejection.

Independent claims 1, 6 and 8 recite:

1. "A method for use in a mobile station, the method comprising the steps of:
attaching to a wireless data network; and
performing asymmetric traffic class negotiation with the wireless data network during a single resource reservation protocol (RSVP) session by transmitting to the wireless data network, a quality of service information element (QoS IE) comprising at least two traffic class fields, one for an uplink direction and one for a downlink direction associated with the mobile station, said QoS IE further comprising at least one QoS class indicator for prioritizing a plurality of acceptable QoS traffic classes." (emphasis added).
6. "A method for use in a first packet server of a wireless network, the method comprising the steps of:
exchanging messages with a second packet server for the purpose of providing at least one service to a mobile station, wherein the exchanging step includes the step of transmitting to the second packet server a message associated with a single RSVP session comprising a quality of service information element (QoS IE) comprising a field for requesting asymmetric traffic classes for an uplink direction and a downlink direction associated with the mobile station, said QoS IE further comprising at least one QoS class indicator for prioritizing acceptable QoS traffic classes associated with at least one of said uplink direction and said downlink direction." (emphasis added).
8. "A packet server comprising:
a transceiver for exchanging messages with a second packet server for the purpose of providing at least one service to a mobile station; and
a processor for causing to be transmitted to the second packet server a message associated with a single RSVP session comprising a quality of service information element (QoS IE) comprising a field for requesting asymmetric traffic classes for an uplink direction and a downlink direction associated with the mobile station, said QoS IE further comprising at least one QoS class indicator for prioritizing acceptable QoS traffic classes." (emphasis added).

The Haumont reference fails to disclose each and every element of the claimed invention, as arranged in the claim. In particular, the Haumont reference discloses

Internet applications are typically asymmetric, i.e. uplink and downlink flows have different QoS requirements. For example, in video-on-demand applications, video games, etc., the uplink traffic is typically a signalling link which requires a reliable transmission but does not have any strict delay requirements. The corresponding downlink traffic is downloaded video information having just the opposite requirements: it has an upper limit on delay but missed frames can be ignored without undue harm. Two parameter sets have to be negotiated (either as separate QoS profiles for uplink and downlink, or a QoS profile includes two separate values for uplink and downlink). (see Haumont, page 11, lines 23-32).

Nowhere in the Haumont reference is there any teaching or even suggestion of “said QoS IE further comprising at least one QoS class indicator for prioritizing acceptable QoS traffic classes.” In fact, the Haumont reference is completely silent with respect to being able to prioritizing or changing the quality of service traffic classes using a single QoS IE. Therefore, the Haumont reference fails to teach each and every element of the claimed invention, as arranged in the claim.

As such, the Applicant submits that independent claims 1, 6, and 8 are not anticipated and fully satisfy the requirements of 35 U.S.C. §102 and are patentable thereunder. Furthermore, claims 3 and 5 depend, either directly or indirectly, from independent claim 1 and recite additional features thereof. As such and at least for the same reasons as discussed above, the Applicant submits that these dependent claims are also not anticipated and fully satisfy the requirements of 35 U.S.C. §102 and are patentable thereunder. Therefore, the Applicant respectfully requests that the Examiner's rejection be withdrawn.

35 U.S.C. §103

Claims 4, 7, and 9

The Examiner has rejected claims 4, 7, and 9 as being obvious and unpatentable under the provisions of 35 U.S.C. §103(a). In particular, the Examiner has rejected claims 4, 7 and 9 as being unpatentable over Haumont. The Applicant respectfully traverses the rejection.

Claims 4, 7, and 9 depend, either directly or indirectly, from independent claims 1, 6, and 8 and recite additional features thereof. In particular, claim 4 recites in part:

“A method for use in a mobile station, the method comprising the steps of:
attaching to a wireless data network; and
performing asymmetric traffic class negotiation with the wireless data network during a single resource reservation protocol (RSVP) session by transmitting to the wireless data network, a quality of service information element (QoS IE) comprising at least two traffic class fields, one for an uplink direction and one for a downlink direction associated with the mobile station, said QoS IE further comprising at least one QoS class indicator for prioritizing a plurality of acceptable QoS traffic classes.” (emphasis added).

The test under 35 U.S.C. §103 is not whether an improvement or a use set forth in a patent would have been obvious or non-obvious; rather the test is whether the claimed invention, considered as a whole, would have been obvious. Jones v. Hardy, 110 USPQ 1021, 1024 (Fed. Cir. 1984) (emphasis added). Moreover, the invention as a whole is not restricted to the specific subject matter claimed, but also embraces its properties and the problem it solves. In re Wright, 6 USPQ 2d 1959, 1961 (Fed. Cir. 1988) (emphasis added). The Haumont reference fails to teach or suggest the Applicant's invention as a whole.

As discussed above, the Haumont reference discloses

“Two parameter sets have to be negotiated (either as separate QoS profiles for uplink and downlink, or a QoS profile includes two separate values for uplink and downlink). (see Haumont, page 11, lines 29-32).

Nowhere in the Haumont reference is there any teaching or suggestion of “said QoS IE further comprising at least one QoS class indicator for prioritizing a plurality of acceptable QoS traffic classes.” For example, the Applicant's invention enables a user to downgrade QoS classes by illustratively providing QoS class indicators, such as a “D” bit in octet 5 or a “U” bit in octet 3 to indicate a that a change in class may be provided in either the uplink or downlink directions, and that the QoS traffic classes may be prioritized based on QoS service (see Applicant's specification page 5, line 27 to

page 7, line 18, and FIGS. 4 and 6). Therefore, the Haumont reference fails to teach or suggest the Applicant's invention as a whole.

As such, the Applicant submits that dependent claim 4, and similarly dependent claims 7 and 9, are also not anticipated and fully satisfy the requirements of 35 U.S.C. §103 and are patentable thereunder. Therefore, the Applicant respectfully requests that the Examiner's rejection be withdrawn.

THE SECONDARY REFERENCES

The secondary references made of record are noted. However, it is believed that the secondary references are no more pertinent to the Applicant's disclosure than the primary references cited in the office action. Therefore, the Applicant believes that a detailed discussion of the secondary references is not necessary for a full and complete response to this Office Action.

CONCLUSION

Thus, the Applicant submits that none of the claims presently in the application are anticipated or obvious under the respective provisions of 35 U.S.C. §102 and §103. Further, the Applicant submits that the claimed invention is directed to statutory subject matter and is patentable under 35 U.S.C. §101. Accordingly, both reconsideration of this application and its swift passage to issue are earnestly solicited.

If, however, the Examiner believes that there are any unresolved issues requiring adverse final action in any of the claims now pending in the application, it is requested that the Examiner telephone Eamon J. Wall at (732) 530-9404 so that appropriate arrangements can be made for resolving such issues as expeditiously as possible.

Respectfully submitted,

Dated: 12/2/04

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THE DRAWINGS

The attached sheets of drawing include changes to Figs. 2, 4 and 6. These sheets replace the original sheets including Figs. 2, 4 and 6. In Figs. 2, 4 and 6, IEI has been changed to IE (of Octet 1).

Attachment: Replacement Sheet